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IN THE

Supreme Court of the United States

October Term, 1976

No. 77-129

NATIONAL MICRONETICS INC.,

Petitioner,

v.

U.S. PHILIPS CORP.,
NORTH AMERICAN PHILIPS CORP.,
N. V. PHILIPS GLOEILAMPENFABRIEKEN,

Respondents.

On Petition for Writ of Certiorari to the
United States Court of Appeals for the Second Circuit

REPLY OF PETITIONER TO
BRIEF IN OPPOSITION

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**REPLY OF PETITIONER TO
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I

Respondent's brief in opposition does not even attempt to meet the issue presented: Does the "solution" of an alleged problem by a combination of prior art, without meeting this Court's requirements as to invention and non-obviousness justify a judgment of patentability? The Second Circuit has answered this question in the affirmative in

the present case, in *Timely Products Corp. v. Arron*, 523 F.2d 288 (CA2, 1975) and in *Roanwell Corp. v. Plantronics, Inc.*, 535 F.2d 1397 (CA2, 1976), cert. den. 97 S.Ct. 538 (Dec. 6, 1976) (Brennan and White, JJ., dissenting, with opinion by Mr. Justice White). Both *Plantronics* and the present case apply the doctrine as announced in the Second Circuit's opinion in *Timely Products*. The Circuit's opinion in *Timely Products* was written by District Judge Conner, sitting in the Second Circuit by designation.

Judge Conner, a former patent attorney,¹ in an article published in the American Patent Law Association, 5 APLA Journal 77-86 (1977) (reprinted in the Appendix to this Brief), states that he wrote the relevant portion of *Timely Products* for the specific purpose of challenging this Court's decisions that "secondary considerations" of long-felt need, commercial success and problem-solving do not establish "invention" and "non-obviousness"; and he notes with satisfaction that the Second Circuit followed his lead in *Plantronics* and in the present case.

The principle at issue is clear. The Peloschek patent is concededly a combination of prior art, with no new element. No finding of synergism was or could be made by either the District Court or the Court of Appeals. Instead, their decision turned upon the "secondary considerations" of the alleged existence of a problem which Peloschek "solved". Even as to the crucial "secondary consideration" of commercial acceptance—the best evidence of a long-felt need for the solution of a problem and of a substantial contribution to the art—the District Judge found that the evidence

1. Former President of the New York Patent Law Association in 1972-1973.

was "meager" (A 60);² *Petition*, pp. 8-9, and he concedes that the question of obviousness "is a close one" (A 57).³

In these circumstances, both courts viewed the decisive factor to be the following statement of the Second Circuit in *Timely Products* (523 F.2d 288, 294):

"We can conceive of no better way to determine whether an invention would have been obvious to persons of ordinary skill in the art at the time than to see what such persons actually did or failed to do when they were confronted with the problem in the course of their work. If the evidence shows that a number of skilled technicians actually attempted, over a substantial period, to solve the specific problem which the invention overcame and failed to do so, notwithstanding the availability of all the necessary materials, it is difficult to see how a court could conclude that the invention was 'obvious' to such persons at the time."

We respectfully submit that there can be no doubt of the direct challenge to this Court's authoritative decisions than is presented by this quote and the Second Circuit's adoption and application of this proposition in the present case as well as in *Plantronics, supra* (see Judge Conner's statement and discussion, *infra*). The essence of the matter is precisely stated in Mr. Justice White's opinion dissenting from denial of certiorari in *Plantronics* (97 S.Ct. at 541):

"[i]n *Graham*, we expressly rejected a claim that the secondary considerations could fill the void left by 'exceedingly small and quite nontechnical mechanical

2. "A" refers to the Appendix to the Petition for Certiorari.

3. The Trial Court stated that "In light of the record, the Court has not attached great weight to the proof offered of commercial success" (A 60). (See *Petition*, p. 5, for a summary showing the lack of commercial success.)

differences in a device which was old in the art.' *Id.*, at 35-36, 86 S.Ct. 684. . . . As a general proposition, I agree that our crowded docket does not permit review of every case where error has been committed; but this case seems to me to involve such a significant departure from longstanding principles of patent law that the petition for certiorari should be granted."

In his article, Judge Conner, the author of the District Court's opinion in *Plantronics* which the Second Circuit adopted (535 F.2d at 1389), and the author of *Timely Products*, candidly discloses that the purpose and thrust of these cases is to depart from *Graham v. John Deere*, 383 U.S. 1, 86 S.Ct. 684 (1966) and subsequent decisions of this Court. Their purpose and effect is to convert the "secondary considerations" into the dispositive test of invention and non-obviousness. As Mr. Justice White stated (97 S.Ct. at 541, citing prior decisions of this Court), this Court "has consistently and repeatedly rejected the claim that the [constitutional] standard of invention or [the statutory requirement of] non-obviousness can be satisfied solely by these 'objective' criteria."

1. For example: A claim of "long-felt need" is not enough in the absence of true invention. *Cf. Graham, supra*, 383 U.S. at 35-36; 86 S.Ct. at 703; *Dow Chemical v. Halliburton*, 324 U.S. 326 at 330, 65 S.Ct. 647 at 651-652.

2. The fact that other inventors failed to resort to a method may be "wholly irrelevant." *Cf. Graham, supra*, 383 U.S. at 36, 86 S.Ct. at 703.

3. Greater utility does not establish novelty. *Paramount Publix Corp. v. American Tri-Ergon Corp.*, 294 U.S. 464 at 476, 55 S.Ct. 449 at 453-454 (1935).

4. Improvements, new combinations, new techniques appear in great numbers and with great frequency; but unless they are true inventions and are non-obvious—unless they add to the storehouse of fundamental knowledge—patentability does not follow. (See cases quoted, *Petition*, pp. 14-16.)

The basic principle was again stated as follows in *Dow Chemical v. Halliburton*, 324 U.S. 320 at 328, 65 S.Ct. 647 at 650 (1945):

"He who is merely the first to utilize the existing fund of public knowledge for new and obvious purposes must be satisfied with whatever fame, personal satisfaction or commercial success he may be able to achieve. Patent monopolies, with all their significant economic and social consequences, are not reserved for those who contribute so insubstantially to that fund of public knowledge."

There can be no doubt that in the present case, as well as in *Plantronics*, the Second Circuit has embraced the problem-solving formula of *Timely Products*—in direct conflict with this Court's fundamental directives as to the interpretation and application of the constitutional and statutory standards. As Judge Conner states in his APLA article (p. 86), his opinion in *Timely Products* quoted above, was "the basis for a ruling of patent validity in" both *Plantronics* and the present case. In the present case, the majority opinion begins its "DISCUSSION" (A 14) by quoting the problem-solving principle of *Timely Products*, as set forth *supra*, and then proceeds to apply it as follows:

"The existence of an important problem in the art which has remained unsolved for a long period, despite

continued efforts and a series of refinements of the art, until a new combination of concepts produces a solution, is evidence that the combination was not obvious." (550 F.2d at 723, A 16).⁴

We respectfully submit that there is urgent need for this Court to review and reverse the decision of the Second Circuit, itself an important patent forum, and to prevent the spread to other circuits of the *Timely Products* challenge to the authoritative decisions of this Court.

II

Respondent, by a complex technical discussion, attempts to persuade this Court that this is a "run-of-the-mill case" in which the validity of the patent can be sustained on accepted principles. Its argument is palpably insupportable. It does not and cannot challenge the fact that the patent in issue is a combination of prior art; and this Court has repeatedly held that combination patents must meet a "severe test" in view of the "improbability of finding invention in an assembly of old elements." *Great Atlantic and Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 at 152, 71 S.Ct. 127 at 130 (1950). It does not and cannot challenge the absence of any novel element in the Peloschek process. The use of "shims" or spacers to obtain precision in the size of the gap is disclosed and claimed in a number of prior patents, most of them owned

4. The District Judge in the present case also quoted *Timely* and concluded that "Thus, as simple as the invention now appears, the Court cannot conclude that it was obvious to persons skilled in the art when the record discloses that these others endeavored during the seven year period to solve the problem unsuccessfully." (410 F.Supp. at 466, A 59).

by Philips.⁵ As to capillary action, as the Trial Court recognized, prior to Peloschek, there was "widespread use of capillary action to fill minute gaps" (410 F.Supp. at 465, A 56); prior to Peloschek it was known that glass would flow by capillary, and indeed flow by capillary on ferrite (A 55, 56); and capillary was used as in the *Grant* patent to fill a gap of "fixed dimensions."⁶ (410 F. Supp. at 464-465, A 56.)⁷

While it is admitted that Peloschek is a combination of prior art, neither court below claimed a synergistic effect for the Peloschek process. Respondent's brief attacks the requirement of synergism. It boldly notes that "synergism is not mandated by the statute; Sec. 103 of Title 35 requires only *nonobviousness*, whether synergism may exist or not."—But this requirement in order to validate combination patents is fundamental in this Court's decisions which repeatedly hold that "a combination which only unites old elements without any change in their respective functions . . . obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men." *Great Atlantic and Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. at 152, 71 S.Ct. at 130; *Andersons-Black Rock v. Pavement Salvage*

5. E.g., the *Duinker* patents owned by Philips (Pats. Nos. 3,117,367, DX-K; 3,375,575, PX-248).

6. This, of course, negates Respondent's suggestion (not made in the Peloschek claims) that there is "novelty" in Peloschek's alleged achievement of "precision."

7. Cf. the dissenting Circuit Judge's remarks about the Peloschek process: ". . . filling a narrow space between two pieces of metal with a melted non-magnetic material such as glass through capillary action. . . . I find this to be simply an adaptation of a physical process familiar to every embryonic schoolboy scientist. . . ." (550 F.2d at 724, A 19).

Co., 396 U.S. at 60, 90 S.Ct. at 307-308; *Sakraida v. Ag Pro, Inc.*, 96 S.Ct. at 1537 (1976).

Respondent attempts a feeble argument that synergism was obtained by the "unexpected results of uniform reproducibility and of bubble elimination." Even if these contentions were supportable, they have nothing to do with the requirement of synergism as Respondent's labored attack impliedly acknowledges. (Respondent's Brief, pp. 16-17, submits that synergism in mechanical or physical situations is . . . only a "figure of speech.") No new or different function resulting from the combinations of the prior arts is claimed, or can be claimed. Respondent's essay at an argument in this respect is nothing more than the familiar effort of counsel to establish patentability by claiming the superiority of results which the alleged invention produces, a tactic which this Court has repeatedly rejected in the combination-patent cases. Respondent's half-hearted contention, taken at its fullest value, is neatly disposed of in *Sakraida, supra*, which involved a superior method of removing manure from the floor of a dairy barn (96 S.Ct. at 1537):

"Though doubtless a matter of great convenience, producing a desired result in a cheaper and faster way, and enjoying commercial success, [the patentee] 'did not produce a "new or different function" . . . within the test of validity of combination patents.' *Anderson's-Black Rock v. Pavement Co., supra*, 396 U.S. at 60, 90 S.Ct. at 308, 24 L.Ed.2d at 261. These desirable benefits 'without invention will not make patentability.' *Ad&P Tea Co. v. Supermarket, etc. Co., supra*, 340 U.S. at 153, 71 S.Ct. at 130, 95 L.Ed. at 167. See *Dann v. Johnston, supra*, — U.S. at —, 96 S.Ct. at 1399, 47 L.Ed.2d at —, n. 4."

In fact, however, if the Peloschek patent embodies any difference from prior art, which it does not, those differences cannot support patentability. As this Court held in *Dann v. Johnston*, 96 S.Ct. 1393 at 1399 (1976):

". . . the mere existence of differences between the prior art and an invention does not establish the invention's nonobviousness. The gap between the prior art and respondent's system is simply not so great as to render the system nonobvious to one reasonably skilled in the art."

Accordingly, Respondent's effort to persuade this Court to ignore the issue presented: namely, the use of alleged problem-solving as determinative of patentability, must fail. The issue in this case is plain: it is presented by the Second Circuit's adherence to the problem-solving principle of *Timely Products* and its attempted exaltation of "secondary considerations" to primary and conclusive bases of patentability. The issue presented is of basic importance to patent law and to our constitutional and economic system of open-enterprise. The Second Circuit is a major forum. Its decision in the present case is not isolated or a "sport"; this is the third recent case in which the present issue figures. And the present decision is likely to be followed in other circuits.

Conclusion

We respectfully submit that certiorari should be granted.

Respectfully submitted,

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APPENDIX

APLA
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To promote the Progress of Science and useful Arts,
by securing for limited Times to Authors
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Discoveries;

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The 25th Anniversary of Section 103 Of The Patent Laws by:

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GERALD H. BJORGE of Virginia

SOME HIGHLY PERSONAL REFLECTIONS
ON SECTION 103
BY THE HONORABLE WILLIAM C. CONNER

It is my considered conviction that, in the entire code of federal law, there is no statute which is more generally misunderstood and misapplied, and with more serious consequences, than Section 103 of Title 35.

The terms of the statute seem clear enough: an invention which falls within one of the categories listed in Section 101, and which is new and useful as required by Sections 101 and 102, is patentable unless

"* * * the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

The obviousness which negates patentability is not obviousness to a court at the time it makes its decision, with the powerful aid of hindsight, but obviousness to persons of ordinary skill in the art at the time the invention was made.

I can conceive of no logical way to make such a determination without reviewing the history of the art before and after the invention was made, to see what real persons associated with the art actually did or failed to do when confronted with the problem or when presented with its solution.

Among the historical circumstances which have properly been accepted as evidence of non-obviousness are a recognized, long-standing need; unsuccessful efforts to satisfy it, particularly by those with substantial means and facilities; defiance of accepted scientific precepts; skepticism of experts as to the practicality of the invention; copying of the invention by others; displacement of prior art devices from use or sale; acceptance of royalty-bearing licenses; and an impressive volume of sales.

The last-mentioned class of evidence—commercial success—although the most frequently relied upon, is the least probative of all those listed. It may too easily be explained away as attributable to other causes such as extensive advertising and sales promotion or to unpatented features of the product, including even its cosmetic appeal. Alone at the opposite extreme of the spectrum lies the trial and failure of others.

Indeed, although all such types of evidence are frequently referred to collectively and indiscriminately as "circumstantial," evidence of unsuccessful efforts may closely approach the status of direct evidence.

If the proofs establish that a number of persons skilled in the art, with adequate means and facilities, unsuccessfully attempted, over a substantial period, to solve a problem, it seems all but impossible for a court to conclude that the solution was "obvious" to such persons at the very time they were vainly searching for it.

This rationale is not altogether new. Shortly after the 1952 Act became effective, Judge Learned Hand in *Lyon v. Bausch & Lomb Optical Co.*, 224 F.2d 530, 535, 106 USPQ 1, 5 (2d Cir. 1955), after rejecting the persistent argument that Section 103 had merely codified the established judicial standard of patentability, stated:

"The most competent workers in the field had for at least ten years been seeking a hardy, tenacious coating to prevent reflection; there had been a number of attempts, none satisfactory; meanwhile nothing in the implementary arts had been lacking to put the advance into operation; when it appeared, it supplanted the existing practice and occupied substantially the whole field. We do not see how any combination of evidence could more completely demonstrate that, simple as it was, the change had not been 'obvious * * * to a person having ordinary skill in the art'—§ 103."

Five years later, in *Reiner v. I. Leon Co., Inc.*, 285 F.2d 501, 503-504, 128 USPQ 25, 27-28 (2d Cir. 1960), Judge Hand suggested somewhat more general guidelines for resolving the issue of obviousness:

"The test laid down is indeed misty enough. It directs us to surmise what was the range of ingenuity of a person 'having ordinary skill' in an 'art' with which we are totally unfamiliar; and we do not see how such a standard can be applied at all except by recourse to the earlier work in the art, and to the general history of the means available at the time. To judge on our own that this or that new assemblage of old factors was, or was not, 'obvious' is to substitute our ignorance for the acquaintance with the subject of those who were familiar with it. There are indeed some sign posts: e.g. how long did the surrounding and accessory arts disclose the means; how immediately was the invention recognized as an answer by those who used the new variant?"

In another case decided the same day, *Norman v. Lawrence*, 285 F.2d 505, 506, 128 USPQ 28, 29 (2d Cir. 1960), Judge Hand further refined the instructions:

"* * * while the standard remains what it is, we can see no escape from measuring invention in cases where all the elements of the new combination had been long available, (1) by whether the need had long existed and been desired, and (2) whether, when it was eventually contrived, it was widely exploited as a substitute for what had gone before."

Six years later, the Supreme Court, in its first decision interpreting Section 103, *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966), approved a similar approach:

"Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy."

Later in the same opinion, in discussing evidence of long-felt need and unsuccessful efforts, Justice Clark cited Judge Hand's decision in *Reiner v. I. Leon, supra*, and stated:

"Such inquiries may lend a helping hand to the judiciary which, as Mr. Justice Frankfurter observed, is most ill-fitted to discharge the technological duties cast upon it by patent legislation. [citation]. They may also serve to 'guard against slipping into use of hindsight,' [citations] and to resist the temptation to read into the prior art the teachings of the invention in issue." 383 U.S. at 36, 148 USPQ at 474.

But, having struck this pure note, the opinion immediately went off key by adding:

"However, these factors do not in the circumstances of this case tip the scales of patentability."

This finding of obviousness in the face of evidence of unsuccessful efforts, the unfortunate reference to such evidence as among the "secondary considerations" and the statement that Section 103 had merely codified the existing standard of patentability flawed an otherwise admirable opinion, and doubtless led to much of the confusion which has followed.

Thus, Judge Hand's seemingly inescapable logic has largely been overshadowed and lost to subsequent courts, most surprisingly including some of his distinguished successors on the Court of Appeals for the Second Circuit. In *Vanity Fair Mills, Inc. v. Olga Co.*, 510 F.2d 336, 339, 184 USPQ 643, 645 (2d Cir. 1975), that Court ruled a patent on a panty girdle invalid, stating:

"The troubling aspect of the case is that for well over twenty years no one prior to Mrs. Erteszek had been able to overcome the leg and crotch discomfort problems which seemed endemic to this type of garment, thus casting some doubt on the obviousness of the solution."

Notwithstanding this express finding of unsuccessful efforts, the Court ruled that the invention was unpatentable because

"• • • in the final analysis, these patents represent style and comfort improvements rather than an innovative device for stomach control. • • • while Mrs. Erteszek was a designer, she was not an inventor. • • • once it is established by prior art references that the difference between the patents in suit and the prior art references is not substantial enough to be termed 'invention,' the patent cannot be sustained." 510 F.2d at 340, 184 USPQ at 645-46.

There are several other disturbing aspects of the opinion. In the first place, any judge who belittles "comfort improvements" as a basis for patentability should be sentenced to wear a panty girdle which pinches. Moreover, despite the indefatigable efforts of Judge Giles S. Rich,¹ one of the authors of Section 103, the ghost of the "invention" requirement apparently just can't be exorcised. How that impalpable and amorphous wraith can be powerful enough to overcome the clear mandate of the applicable statute, has to be one of the great unsolved mysteries of the law.

It was with the hope that I might be able to supply an antidote for *Vanity Fair* that I accepted an invitation to sit on the Court of Appeals for the Second Circuit in a patent case, *Timely Products Corp. v. Arron*, 523 F.2d 288, 187 USPQ 257 (2d Cir. 1975). Unfortunately, that vehicle proved singularly ill-fitted for my intended mission, involving patents on socks whose toe portions contain heating wires energized by a small battery contained in a pouch on the cuff. At our post-argument conference, it became clear that, even if I were able to decide that any

of the patents was valid, I would have to express that view in a dissenting opinion. I was relieved to be able to preserve whatever credibility I had with the court by siding with the other two judges and writing the majority opinion. But, for whatever it might contribute toward my original objective, and *apropos* of absolutely nothing in the case, I volunteered this bit of pedagogy:

"We can conceive of no better way to determine whether an invention would have been obvious to persons of ordinary skill in the art at the time than to see what such persons actually did or failed to do when they were confronted with the problem in the course of their work. If the evidence shows that a number of skilled technicians actually attempted, over a substantial period, to solve the specific problem which the invention overcame and failed to do so, notwithstanding the availability of all the necessary materials, it is difficult to see how a court could conclude that the invention was 'obvious' to such persons at the time." 523 F.2d at 294, 187 USPQ at 261.

But, to return to the matter before the Court, I was obliged to add in the next sentence:

"However, no such evidence exists in this case."

I took further advantage of my temporary forum by attempting to rationalize the Supreme Court's reference in *Graham* to evidence of long-felt need and unsuccessful efforts as "secondary considerations," stating:

"In referring to such factors as 'secondary considerations' the Court surely did not intend to depreciate their importance, but only to indicate that they are to be considered *after* a preliminary determination of the precise subject matter at issue has been completed:

"Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." *Ibid.*

I believe that much of the difficulty that the courts have experienced in applying Section 103 stems from their confusion between the "background" determination of the differences between the patented inven-

1. Rich, "Laying the Ghost of the 'Invention' Requirement," I A.P.L.A. QUARTERLY JOURNAL 24 (1972); see also Rich, "Change," II A.P.L.A. QUARTERLY JOURNAL 214-224.

tion and the prior art (which is based upon a largely documentary record and as to which there accordingly should be little room for dispute) and the resolution of the critical issue whether the subject matter as a whole (not just these differences) would have been "obvious" to those of ordinary skill in the art at the time.

The following statement from the opinion in *Vanity Fair* is a fair illustration of this continuing confusion, which careful application of Section 103 could eliminate:

"While such secondary considerations as commercial success and long felt but unsolved needs in the field constitute relevant evidence in a close case on the issue of obviousness, once it is established by prior art references that the difference between the patents in suit and the prior art is not substantial enough to be termed 'invention', the patent cannot be sustained." 510 F.2d at 340, 184 USPQ at 646.

An even more striking example is this statement in *Westwood Chemical Inc. v. Owens-Corning Fiberglas Corp.*, 445 F.2d 911, 918, 171 USPQ 1, 6 (6th Cir. 1971):

"Plaintiff argues that insufficient weight was given by the District Court to the important secondary indicia of nonobviousness such as commercial success, *Graham v. John Deere Company*, 383 U.S. 1, 17, 86 S. Ct. 684, 15 L.Ed.2d 545 (1965); Application of Sponoble, 405 F.2d 578 (C.C.P.A. 1969); and long felt but unresolved need in the industry, *Young Corporation v. Jenkins*, 396 F.2d 893 (10th Cir. 1968). However, secondary indicia of nonobviousness are relevant and become supplementally useful only when there is a close question of whether the subject matter of an invention was obvious. *Kaiser Industries Corporation v. McLouth Steel Corporation*, 400 F.2d 36 (6th Cir. 1968); *Waldon, Inc. v. Alexander Manufacturing Company*, 423 F.2d 91 (5th Cir. 1970). These secondary considerations, *no matter how persuasive*, cannot save the patentability of an invention when it clearly appears, as in this case, that the invention was obvious to one skilled in the art." [emphasis added.]

It seems clear that these courts, along with many others, have resolved the issue of obviousness on the basis of the "background" considerations alone—that is, upon their own instinctive feeling whether the differences between the patented invention and the prior art are sufficiently important to merit a seventeen-year right of exclusion—before they have reached the best evidence in the case bearing on the obvious-

ness of the invention as a whole. This is disturbingly reminiscent of the mythical judge who said, "Don't confuse me with the facts."

Some of the fault regrettably rests with the patent bar itself. In one patent infringement suit I heard (nameless here for obvious reasons), the patent owner-plaintiff introduced not a scintilla of evidence supporting a conclusion of nonobviousness. It was even expressly stipulated that the plaintiff was not relying on commercial success. The plaintiff's *prima facie* case amounted to essentially nothing more than introducing the patent in suit and a claim chart showing where the several elements called for in the claims could be found in the defendant's accused structures.

Plaintiff thus left the Court to resolve the issue of obviousness on the sole basis of its hindsight appraisal of the differences between the claimed invention and the prior art. However, the defendant did offer some objective evidence bearing on the critical issue: the development of the invention had been prompted by a change in the applicable national safety regulations and, at about the same time that the patentee devised a way to meet the more stringent safety standards, virtually every other manufacturer independently accomplished the same result, employing substantially the same expedients. Just as the unsuccessful efforts of others constitute the strongest evidence of nonobviousness, so may success, particularly if achieved by a number of others soon after the problem arises, be the strongest evidence to the contrary.

Within a few days after the filing of my opinion for the Court of Appeals in *Timely Products v. Arron*, *supra*, I lent new dimension to the term "bootstrap" by citing my wholly gratuitous dictum in that opinion in support of a ruling of validity in *Plantronics, Inc. v. Roanwell Corp.*, 403 F. Supp. 138, 148, 187 USPQ 489, 498 (S.D.N.Y. 1975). In what might be regarded as an anticipatory denunciation of any appellate court with the effrontery to reject my reasoning, I added:

"Indeed, as simple as the invention now appears, it would seem presumptuous to the point of arrogance to conclude that it was 'obvious' to persons of ordinary skill in the art, notwithstanding their lengthy and unsuccessful struggle to achieve such results."

Graciously overlooking my brashness, the Court of Appeals affirmed *per curiam* "on the opinion below," 192 USPQ 67 (1976). The Supreme Court denied certiorari, but Justice White, joined by Justice Brennan, was moved to the unusual extent of writing a vigorous dissent, 192 USPQ 65 (1976). Although he recognized that the record contained "an admittedly impressive account of prior failures," he stated:

"This Court long ago established that the *sine qua non* of patentability is 'invention' and that the protection of the patent law does not extend to an 'improvement' that is the work of the skilled mechanic, not that of the inventor."

However, perhaps sensitive to the growing criticism of judicial references to an "invention" requirement, instead of the "nonobviousness" standard of Section 103, Justice White sought to equate the two:

"In 1952, Congress codified this judicial standard ['invention'] by requiring that the improvement sought to be patented 'would not have been obvious at the time the invention was made to a person having ordinary skill in the art.' 35 U.S.C. § 103. Whether referred to as 'invention' or 'nonobviousness' the requirement is based on the constitutional command that patents be used to 'promote the Progress of * * * useful arts'."

But no sooner had Justice White thus sparked the hopes of the strict constructionists than he quenched them by reiterating the requirement of "synergism" which the Court had grafted onto Section 103 in *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 61, 163 USPQ 673, 674 (1969), and *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282, 189 USPQ 449, 452-53 (1976), stating:

"When a device consists of a mere aggregation of segments of the prior art, there is an increased danger that a patent will withdraw into its monopoly what is already known and add nothing to the sum of useful knowledge. Thus, to be patentable, a combination of elements must produce something more than the sum of the pre-existing elements; there must be a synergistic result that is itself non-obvious."

Every machine, every electrical circuit and electro-mechanical device, and almost every mechanical instrument of any kind, consists of a combination of elements. With extremely rare exceptions, every one of such elements is old. The assembly of these old elements in a novel relationship creates a new entity. According to Section 103 it is the obviousness of this subject matter "as a whole" which determines its patentability. It does not suffice to break the faggot stick by stick. And Section 103 suggests no reason why the patentability of this entity should be measured by a different standard than any other type of invention if, indeed, there could be any other type.

Moreover, in every such combination, each individual component always performs its characteristic function: a gear always acts like a gear, a

resistor like a resistor, and so on. And the overall performance of the combination is always precisely equal to the sum of the functions of its components. In the real world, two plus two never equals five.

So long as courts continue to insist that inventions consisting of combinations of old elements, which is to say virtually all inventions in the mechanical and electrical arts, exhibit a quality or characteristic which cannot exist in such a context, there can be no meaningful standard of patentability. Whenever a court, as a purely visceral reaction, feels that an invention is unworthy of patent protection, it can always rationalize that result by finding that the combination does not exhibit synergism.

Synergism is thus a modern substitute for the "flash of genius" standard which was promulgated in *Cuno Engineering Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 91, 51 USPQ 272 (1941) and which prompted the provision in Section 103 that "[p]atentability shall not be negated by the manner in which the invention was made." Since synergism has nothing to do with the manner in which the invention was made (nor, indeed, with anything else in the mechanical and electrical arts), this provision doesn't touch it. In any revision of the patent laws, the elimination of the judicially created synergism requirement should receive high priority.

But the present darkness is pierced by occasional shafts of light. In addition to the unrelenting campaign of Judge Rich which, with the support of his brothers on the Court of Customs and Patent Appeals, has made that tribunal a paragon of punctilious application of Section 103, and the dauntless insistence of Commissioner Marshall A. Dann that the Patent and Trademark Office adhere to the statutory nonobviousness standard, despite *Anderson's-Black Rock* and *Sakraida*,² there are such beacon opinions as *Reeves Instrument Corp. v. Beckman Instruments, Inc.*, 444 F.2d 263, 270-73, 170 USPQ 74, 79-82 (9th Cir. 1971), and *Saf-Guard Products, Inc. v. Service Parts, Inc.*, 370 F. Supp. 257, 267-70, 181 USPQ 297, 305-7 (D. Ariz. 1973).

And, of course, we must take some heart from the fact that seven justices of the Supreme Court did not subscribe to the dissenting opinion in *Plantronics*.

². 949 Official Gazette, No. 1, p. 3 (8/3/76); see also Patent, Trademark & Copyright Journal, No. 290, p. A-2 (8/12/76).

Finally, just as this effort was going to press, I was gratified to learn that the Court of Appeals for the Second Circuit had quoted my aforementioned dictum in *Timely Products v. Arron, supra*, as the basis for a ruling of patent validity in *U.S. Philips Corp. v. National Micronetics, Inc.*, 193 USPQ 65 (1977).

We may still live to see Section 103 generally applied as presently written.